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10 CFR 50.54(q)

United States Nuclear Regulatory Commission (NRC)
ATTN: Document Control Desk
Washington, DC 20555-0001

Brunswick Steam Electric Plant, Unit Nos. 1 and 2
Renewed Facility Operating License Nos. DPR-71 and DPR-62
Docket Nos. 50-325 and 50-324

**SUBJECT: Procedures:
CSD-EP-BNP-0101-01, "EAL TECHNICAL BASIS DOCUMENT", Revision 008
CSD-EP-BNP-0101-02, "EAL WALLCHART (BOTH HOT AND COLD)", Revision 005
EP-BNP-EPLAN-ANNEX, "DUKE ENERGY BRUNSWICK EMERGENCY PLAN
ANNEX", Revision 003
Summary of Changes**

Ladies and Gentlemen:

In accordance with 10 CFR 50.54(q), Duke Energy Progress, LLC (referred to as Duke Energy), is submitting a revision summary for the following procedures:

- CSD-EP-BNP-0101-01, "EAL TECHNICAL BASIS DOCUMENT", Revision 008
- CSD-EP-BNP-0101-02, "EAL WALLCHART (BOTH HOT AND COLD)", Revision 005
- EP-BNP-EPLAN-ANNEX, "DUKE ENERGY BRUNSWICK EMERGENCY PLAN ANNEX", Revision 003

The Emergency Action Level (EAL) Technical Basis Document Procedure provides explanation and rationale for each EAL and provides historical documentation for future reference. Decision-makers responsible for Classification of Emergency may use this document as a technical reference in support of EAL interpretation. The EAL Wallchart is the primary tool used to determine the Emergency Classification Level. The Duke Energy Brunswick Emergency Plan Annex supplements the Duke Energy Common Emergency Plan by providing site specific information unique to the site.

This revision was initiated as a result of the implementation of a staggered, fleetwide transition to the State and County Offsite Emergency Notification System (SCOENS) from the Duke Emergency Management Network (DEMNET). SCOENS has replaced DEMNET as the primary means of communication for the Main Control Room and Emergency Operations Facility when contacting Offsite Response Organizations. Editorial changes are also incorporated as shown in the review forms attached.

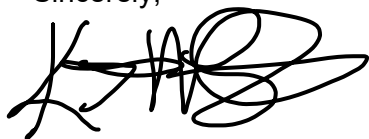
The changes described above have been evaluated in accordance with 10 CFR 50.54(q) and have been determined to not result in a reduction in the effectiveness of the Emergency Plan. The Duke

Energy Common Emergency Plan continues to meet the standards of 10 CFR 50.47(b) and the requirements of 10 CFR 50, Appendix E. In accordance with 10 CFR 50.54(q)(5), a summary of analysis is included as Attachment 1: 10 CFR 50.54(q) Review Form – EAL Technical Basis and Wallchart, and Attachment 2: 10 CFR 50.54(q) Review Form – BNP EPLAN Annex.

This document contains no new regulatory commitments.

Should you have any questions concerning this letter, or require additional information, please contact Ryan Treadway, Fleet Licensing Director, at (980) 373-5873.

Sincerely,

A handwritten signature in black ink, appearing to be 'K. M. Ellis', written in a cursive style.

Kevin M. Ellis
General Manager – Nuclear Regulatory Affairs, Policy & Emergency Preparedness

Attachment 1: 10 CFR 50.54(q) Review Form – EAL Technical Basis and Wallchart
Attachment 2: 10 CFR 50.54(q) Review Form – BNP EPLAN Annex

cc: USNRC, Region II Regional Administrator
USNRC NRR Project Manager for BNP
USNRC Senior Resident Inspector for BNP

Attachment 1: 10 CFR 50.54(q) Review Form – EAL Technical Basis and Wallchart

EMERGENCY PLAN CHANGE SCREENING AND EFFECTIVENESS EVALUATIONS 10 CFR 50.54(Q)	AD-EP-ALL-0602
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Attachment 2
Page 1 of 16**10 CFR 50.54(q) Review Form**

Section I: 10 CFR 50.54(q) Review Number: (EREG #):		02549858 02528047	
Applicable Sites and Applicability Determination # (5AD)			
<input checked="" type="checkbox"/> BNP	02528044	<input type="checkbox"/> CNS	<input type="checkbox"/> HNP
<input type="checkbox"/> MNS		<input type="checkbox"/> ONS	<input type="checkbox"/> RNP
Document #, EC #, or N/A	Revision # or N/A	Document or Activity Title	
CSD-EP-BNP-0101-01	008	EAL TECHNICAL BASIS DOCUMENT	
CSD-EP-BNP-0101-02	005	EAL WALLCHART (BOTH HOT AND COLD)	

Section II: Identify/Describe All Proposed Activities/Changes being Reviewed

Event or action, or series of actions that may result in a change to the emergency plan or affect the implementation of the emergency plan (Use attachments, or continue additional pages as necessary): Continue to **Section III**.

Activity/Changes:

This is a revised 50.54(q) review. Changes to the original 50.54(q) review can be identified by:

- *Additions to this revised 50.54(q) review will appear in Bold and Italicized format.*
- *Deletions to this revised 50.54(q) review will appear in struck through format.*

Attachment 1: 10 CFR 50.54(q) Review Form – EAL Technical Basis and Wallchart

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CSD-EP-BNP-0101-01, EAL Technical Basis Document provides an explanation and rationale for each Emergency Action Level (EAL) for Brunswick Nuclear Plant (BNP). CSD-EP-BNP-0101-02, EAL Wallchart provides a visual aid for quick determination of EAL declarations. The documents are being revised to address the replacement of the Duke Emergency Management Network (DEMNET) with State and County Offsite Emergency Notification System (SCOENS). DEMNET is the system used to notify the State and Local agencies of a declared emergency. The wallcharts also include one minor editorial change.

Change #	Section or Step #	Change From	Change to
1	Throughout – both documents	Old revision number 007 and 004	Updated revision numbers to 008 and 005
2	Revision Summary – Technical Basis Document	Old revision summary	Updated revision summary identifying changes made in Rev. 008
3	Attachment 1, Page 90 of 204 Table C-4 Communication Methods	DEMNET	SCOENS
4	Attachment 1, Page 92 of 204	<u>Duke Emergency Management Network (DEMNET)</u> The DEMNET consists of equipment and circuits linking Duke Energy nuclear sites with the offsite agencies involved in initial emergency notifications. This system can quickly conference the offsite agencies for notifications. All MCRs and the EOF have this system. It may also be located in the site's Alternate Emergency Facility. DEMNET is the primary means of communication for the MCR and EOF when contacting OROs.	<u>State and County Offsite Emergency Notification System (SCOENS)</u> SCOENS consists of a cloud-based service used to develop and deliver emergency and follow up notifications to all required offsite State and local agencies. Being cloud based, the system can be accessed from any Duke Energy Control Room, the EOF, or other facility with Duke LAN access. SCOENS is the primary means of communication for the MCR and EOF when notifying OROs of a declared emergency.
5	Attachment 1, Page 188 of 204 Table S-3 Communication Methods	DEMNET	SCOENS
6	Attachment 1, Page 190 of 204	<u>Duke Emergency Management Network (DEMNET)</u> The DEMNET consists of equipment and circuits linking Duke Energy nuclear sites with the offsite agencies involved in initial emergency notifications. This system can quickly conference the offsite agencies for notifications. All MCRs and the EOF have this system. It may also be located in the site's Alternate Emergency Facility. DEMNET is the primary means of communication for the MCR and EOF when contacting OROs.	<u>State and County Offsite Emergency Notification System (SCOENS)</u> SCOENS consists of a cloud-based service used to develop and deliver emergency and follow up notifications to all required offsite State and local agencies. Being cloud based, the system can be accessed from any Duke Energy Control Room, the EOF, or other facility with Duke LAN access. SCOENS is the primary means of communication for the MCR and EOF when notifying OROs of a declared emergency.
7	Wallboard Table C-4 Communication Methods	DEMNET	SCOENS
8	Wallboard Table S-3 Communication Methods	DEMNET	SCOENS
9	Wallboard Notes – Note 10 – 4 individual locations	indications	indications

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10 CFR 50.54(q) Review Form**Section III: Description and Review of Licensing Basis Affected by the Proposed activity or Change:**

List all emergency plan sections that were reviewed for this activity by number and title.

IF THE ACTIVITY IN ITS ENTIRETY IS AN EMERGENCY PLAN CHANGE, EAL CHANGE OR EAL BASIS CHANGE, Enter Licensing Basis affected by the change and continue to **Section VI**.

Licensing Basis:

Licensing Basis

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan Revision 0
- EP-BNP-EPLAN-ANNEX, Duke Energy Brunswick Emergency Plan Annex Revision 0

Licensing Basis for NEI 99-01 Rev 6 EALS

- BNP: ML15344A153 Letter Dated January 8, 2016. Subject: Brunswick Steam Electric Plant, Units 1 and 2 - Issuance of Amendments regarding Emergency Action Level scheme upgrade (CAC NOS. MF5766 and MF5767)
- Amendment Nos. 268 and 296 to Renewed Facility Operating License Nos. DPR-71 and DPR-62, respectively, for the Brunswick Steam Electric Plant, Units 1 and 2 (BSEP).

Current and Previous Emergency Plan Revision Reviewed

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan Revision ~~5~~**6**
- EP-BNP-EPLAN-ANNEX, Duke Energy Brunswick Emergency Plan Annex Revision ~~2~~**3**

The differences in the approved and the current revision of the Emergency Plan have been reviewed, and they have been determined to meet the regulatory requirements required during the course of revisions.

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Section IV: Ability to Maintain the Emergency Plan.	
Answer the following questions related to impact on the ability to maintain the Emergency Plan. Continue to Section V.	
1. Do any of the elements of the proposed activity change information or intent contained in the Emergency Plan?	Yes <input type="checkbox"/> No <input type="checkbox"/>
2. Do any elements of the proposed activity change the process or capability for alerting or notifying the public as described in the FEMA-approved Alert and Notification System Design Report?	Yes <input type="checkbox"/> No <input type="checkbox"/>
3. Do any elements of the proposed activity change the Evacuation Time Estimate results?	Yes <input type="checkbox"/> No <input type="checkbox"/>
4. Do any elements of the proposed activity change the On-Shift Staffing Analysis results?	Yes <input type="checkbox"/> No <input type="checkbox"/>
5. Does the Proposed activity require a change to the Emergency Plan Programmatic Description?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If Question 5 was answered yes, and the document being reviewed is NOT the Emergency Plan, then exit this review until the Emergency Plan change is complete or the proposed change is modified to not change the Emergency Plan Programmatic Description.	
Section IV conclusion:	
<input type="checkbox"/> If questions 1-5 in Section IV marked NO, then complete Section V . <input type="checkbox"/> If any question 1-5 of Section IV marked yes, then continue at Section VI .	

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10 CFR 50.54(q) Review Form**Section V: Maintaining the Emergency Plan Conclusion.**

The questions in **Section IV** do not represent the total of all conditions that may cause a change to or impact the ability to maintain the emergency plan. Originator and reviewer signatures in **Section XIV** document that a review of all elements of the proposed change have been considered for their impact on the ability to maintain the emergency plan and their potential to change the emergency plan.

1. Provide a brief conclusion below that describes how the conditions, as described in the emergency plan, are maintained with this activity.
 2. Select the box below when the review completes all actions for all elements of the activity and no 10CFR50.54 screening or evaluation is required for any element. Continue to **Section XIV**.
- I have completed a review of this activity in accordance with 10CFR50.54(q)(2) and determined that the effectiveness of the emergency plan is maintained. This activity does not make any changes to the emergency plan. No further actions are required to screen or evaluate this activity in accordance with 10CFR50.54(q)(3).

Conclusion:

Section VI: Activity Previously Reviewed?

Is this activity fully bounded by an NRC approved 10CFR50.90 submittal or Alert and Notification System Design Report?

<input type="checkbox"/>	Yes	10 CFR 50.54(q) Evaluation is not required. Identify bounding source document below and continue to Section XIV .
<input checked="" type="checkbox"/>	No	Continue to Section VII .
<input type="checkbox"/>	Partially	If PARTIALLY , identify bounding source document and list changes bounded by the approved 10 CFR 50.90 or Alert and Notification System Design Report below. Changes not bound by the approved 10 CFR 50.90 or Alert and Notification System Design Report (i.e., part requiring further review). Continue the review in Section VII .

Bounding source document and list of bounded changes:

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Section VII: Editorial Changes		
<input type="checkbox"/>	Yes	All Activities/Changes identified in Section II are editorial/typographical changes such as formatting, paragraph numbering, spelling, or punctuation that does not change intent.
<input type="checkbox"/>	No	None of the Activities/Changes listed in Section II are editorial/typographical changes. Continue to Section VIII .
<input checked="" type="checkbox"/>	Partially	Some Activities/Changes are editorial/typographical.
<p>If Yes is checked, Identify the activities/changes listed in Section II that are editorial/typographical changes and provide justification below. Continue to Section XII.</p> <p>If Partially is checked, Identify the activities/changes listed in Section II that are editorial/typographical changes and provide justification below. Continue to Section VIII for changes not identified as editorial.</p>		

Justification:

The change(s) below are defined as editorial in accordance with AD-EP-ALL-0602, and do not change the intent of the steps as written.

Change 1 is editorial in that it updates the revision numbers for the EAL Technical Basis Document and the Wallboards with no change to the intent of the documents.

Change 2 is editorial in that it updates the revision summary for the EAL Technical Basis Document with no change to the intent of the document.

Change 9 is editorial in that it corrects a spelling error in Note 10 of each of the 4 Notes boxes contained in the Wallboard document with no change to the intent or information provided in Note 10.

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Section VIII: Emergency Planning Element and Function Screen		
<i>(Utilize Reg Guide 1.219 and Attachment 1, Additional Regulatory Guidance References for additional assistance)</i>		
Does any of Proposed Activities/Changes Identified in Section I impact any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II? If yes check appropriate box.		
1	10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)	
1a	Responsibility for emergency response is assigned.	<input type="checkbox"/>
1b	The response organization has the staff to respond and to augment staff on a continuing basis (24-7 staffing) in accordance with the emergency plan.	<input type="checkbox"/>
2	10 CFR 50.47(b)(2) Onsite Emergency Organization	
2a	Process ensures that on shift emergency response responsibilities are staffed and assigned	<input type="checkbox"/>
2b	The process for timely augmentation of onshift staff is established and maintained.	<input type="checkbox"/>
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources	
3a	Arrangements for requesting and using off site assistance have been made.	<input type="checkbox"/>
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan.	<input type="checkbox"/>
4	10 CFR 50.47(b)(4) Emergency Classification System	RS
4a	A standard scheme of emergency classification and action levels is in use. (Requires V/V (Attachment 3) and final approval of Screen and Evaluation by EP CFAM)	<input checked="" type="checkbox"/>
5	10 CFR 50.47(b)(5) Notification Methods and Procedures	RS
5a	Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes (60 minutes for CR3) after declaration of an emergency and providing follow-up notification.	<input checked="" type="checkbox"/>
5b	Administrative and physical means have been established for alerting and providing prompt instructions to public within the plume exposure pathway.	<input type="checkbox"/>
5c	The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter	<input type="checkbox"/>
6	10 CFR 50.47(b)(6) Emergency Communications	
6a	Systems are established for prompt communication among principal emergency response organizations.	<input checked="" type="checkbox"/>
6b	Systems are established for prompt communication to emergency response personnel.	<input type="checkbox"/>
7	10 CFR 50.47(b)(7) Public Education and Information	
7a	Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ).	<input type="checkbox"/>
7b	Coordinated dissemination of public information during emergencies is established.	<input type="checkbox"/>
8	10 CFR 50.47(b)(8) Emergency Facilities and Equipment	
8a	Adequate facilities are maintained to support emergency response	<input type="checkbox"/>
8b	Adequate equipment is maintained to support emergency response.	<input type="checkbox"/>
9	10 CFR 50.47(b)(9) Accident Assessment	RS
9a	Methods, systems, and equipment for assessment of radioactive releases are in use.	<input type="checkbox"/>
10	10 CFR 50.47(b) (10) Protective Response	RS
10a	A range of public PARs is available for implementation during emergencies.	<input type="checkbox"/>

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10b	Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities.	<input type="checkbox"/>
10c	A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.	<input type="checkbox"/>
10d	KI is available for implementation as a protective action recommendation in those jurisdictions that chose to provide KI to the public.	<input type="checkbox"/>
11	10 CFR 50.47(b) (11) Radiological Exposure Control	
11a	The resources for controlling radiological exposures for emergency workers are established.	<input type="checkbox"/>
12	10 CFR 50.47(b) (12) Medical and Public Health Support	
12a	Arrangements are made for medical services for contaminated, injured individuals.	<input type="checkbox"/>
13	10 CFR 50.47(b) (13) Recovery Planning and Post-Accident Operations	
13a	Plans for recovery and reentry are developed.	<input type="checkbox"/>
14	10 CFR 50.47(b) (14) Drills and Exercises	
14a	A drill and exercise program (including radiological, medical, health physics and other program areas) is established.	<input type="checkbox"/>
14b	Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses.	<input type="checkbox"/>
14c	Identified weaknesses are corrected.	<input type="checkbox"/>
15	10 CFR 50.47(b) (15) Emergency Response Training	
15a	Training is provided to emergency responders.	<input type="checkbox"/>
16	10 CFR 50.47(b) (16) Emergency Plan Maintenance	
16a	Responsibility for emergency plan development and review is established.	<input type="checkbox"/>
16b	Planners responsible for emergency plan development and maintenance are properly trained.	<input type="checkbox"/>
Section VIII: Conclusion		
<p>■ If any Section VIII criteria are checked, document the basis for conclusion below for any changes that are more than editorial, however not impacted by any of the identified criteria in Section VIII and continue the 50.54(q) Review in Section IX.</p> <p><input type="checkbox"/> If no Section VIII criteria are checked, 10CFR50.54(q)(3) Evaluation is NOT required. Document justification below for any changes that are more than editorial and continue to Section XIV.</p>		

Justification for changes that are more than editorial, however, not impacted by any of the identified criteria in Section VIII:

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10 CFR 50.54(q) Review Form**Section IX: Description of Emergency Plan Planning Standards, Functions and Program Elements Affected by the Proposed Change**

Copy each emergency planning standard, function and program element affected by the proposed change that was identified as applicable in **Section VIII**. Continue to **Section X**.

List affected Emergency Planning Standards, Functions, and Program Elements:

10CFR50.47(b)(4) – Emergency Classification System

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

10CFR50 Appendix E.IV.**B. Assessment Actions**

1. The means to be used for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring. By June 20, 2012, for nuclear power reactor licensees, these action levels must include hostile action that may adversely affect the nuclear power plant. The initial emergency action levels shall be discussed and agreed on by the applicant or licensee and state and local governmental authorities and approved by the NRC. Thereafter, emergency action levels shall be reviewed with the State and local governmental authorities on an annual basis.

2. A licensee desiring to change its entire emergency action level scheme shall submit an application for an amendment to its license and receive NRC approval before implementing the change. Licensees shall follow the change process in § 50.54(q) for all other emergency action level changes.

C. Activation of Emergency Organization

1. The entire spectrum of emergency conditions that involve the alerting or activating of progressively larger segments of the total emergency organization shall be described. The communication steps to be taken to alert or activate emergency personnel under each class of emergency shall be described. Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described. The existence, but not the details, of a message authentication scheme shall be noted for such agencies. The emergency classes defined shall include: (1) Notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency. These classes are further discussed in NUREG-0654/FEMA-REP-1.

2. By June 20, 2012, nuclear power reactor licensees shall establish and maintain the capability to assess, classify, and declare an emergency condition within 15 minutes after the availability of indications to plant operators that an emergency action level has been exceeded and shall promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level. Licensees shall not construe these criteria as a grace period to attempt to restore plant conditions to avoid declaring an emergency action due to an emergency action level that has been exceeded. Licensees shall not construe these criteria as preventing implementation of response actions deemed by the licensee to be necessary to protect public health and safety provided that any delay in declaration does not deny the State and local authorities the opportunity to implement measures necessary to protect the public health and safety.

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10 CFR 50.54(q) Review Form**The associated EP Function is Function 4a**

A standard scheme of emergency classification and action levels is in use.

The applicable program elements are D.1, D.1.a, D.1.b, and D.2:

D.1 A standard emergency classification and action level scheme is established and maintained. The scheme provides detailed EALs for each of the four ECLs in Section IV.C.1 of Appendix E to 10 CFR Part 50.

D.1.a The EALs are developed using guidance provided or endorsed by the NRC that is applicable to the reactor design.

D.1.b The initial emergency classification and action level scheme is discussed and agreed to by the licensee and OROs, and approved by the NRC. Thereafter, the scheme is reviewed with OROs on an annual basis.

D.2 The capability to assess, classify, and declare the emergency condition within 15 minutes after the availability of indications to NPP operators that an EAL has been met or exceeded is described.

10CFR50.47(b)(5) - Notification Methods and Procedures:

Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and follow-up messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

10CFR50 Appendix E.IV.D. Notification Procedures (in part):

1. Administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, should they become necessary, shall be described. This description shall include identification of the appropriate officials, by title and agency, of the State and local government agencies within the EPZs.

3. A licensee shall have the capability to notify responsible State and local governmental agencies within 15 minutes after declaring an emergency. The licensee shall demonstrate that the appropriate governmental authorities have the capability to make a public alerting and notification decision promptly on being informed by the licensee of an emergency condition. Prior to initial operation greater than 5 percent of rated thermal power of the first reactor at a site, each nuclear power reactor licensee shall demonstrate that administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ. The design objective of the prompt public alert and notification system shall be to have the capability to essentially complete the initial alerting and initiate notification of the public within the plume exposure pathway EPZ within about 15 minutes. The use of this alerting and notification capability will range from immediate alerting and notification of the public (within 15 minutes of the time that State and local officials are notified that a situation exists requiring urgent action) to the more likely events where there is substantial time available for the appropriate governmental authorities to make a judgment whether or not to activate the public alert and notification system. The alerting and notification capability shall additionally include administrative and physical means for a backup method of public alerting and notification capable of being used in the event the primary method of alerting and notification is unavailable during an emergency to alert or notify all or portions of the plume exposure pathway EPZ population. The backup method shall have the capability to alert and notify the public within the plume exposure pathway

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EPZ but does not need to meet the 15-minute design objective for the primary prompt public alert and notification system. When there is a decision to activate the alert and notification system, the appropriate governmental authorities will determine whether to activate the entire alert and notification system simultaneously or in a graduated or staged manner. The responsibility for activating such a public alert and notification system shall remain with the appropriate governmental authorities.

The associated EP Function is Function 5a:

Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications.

The applicable program elements are E1, E.1.a, and E.1.b:

E.1 The mutually agreeable process for direct and prompt notification of response organizations, aligned with the emergency classification and action level scheme, is described.

E.1.a Provisions for notification of response organizations are established, including the means for verification of messages.

E.1.b The capability to notify responsible OROs within 15 minutes and the NRC within 60 minutes is described.

10 CFR 50.47(b)(6) - Emergency Communications:

Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

10CFR50 Appendix E.IV.E:

9. (in part) - At least one onsite and one offsite communications system; each system shall have a backup power source. All communication plans shall have arrangements for emergencies, including titles and alternates for those in charge at both ends of the communication links and the primary and backup means of communication.

The associated EP Function is Function 6a:

Systems are established for prompt communication among principal emergency response organizations.

The applicable program elements are F.1, F.1.a, and F.1.b:

F.1 Each principal response organization establishes redundant means of communication and addresses the following provisions:

F.1.a Continuous capability for notification to, and activation of, the emergency response network, including a minimum of two independent communication links.

F.1.b Communication with applicable organizations to include a description of the methods that may be used when contacting each organization."

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10 CFR 50.54(q) Review Form**Section X: Describe How the Proposed Change Complies with Relevant Emergency Preparedness Regulation(s) and Previous Commitment(s) Made to the NRC**

If the emergency plan, modified as proposed, no longer complies with planning standards in 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50, then ensure the change is rejected, modified, or processed as an exemption request under 10 CFR 50.12, Specific Exemptions, rather than under 10 CFR 50.54(q). Address each Planning Standard identified in **Section IX. Continue to Section XI.**

Justification:

Proposed changes 3, 4, 5, 6, 7, and 8 remove Duke Emergency Management Network (DEMNET) and replace it with State and County Offsite Emergency Notification System (SCOENS). DEMNET is described as a closed network voice over internet protocol (VOIP) system. DEMNET uses a group call within this network, calling specific devices in the same network, to get all OROs in a conference call. This conference call provides the ability to verbally notify all OROs at the same time of a declared emergency or provide them with follow up notifications. This verbal notification is considered the official notification to the OROs. By process, the Emergency Notification Form (ENF) is transmitted to the OROs via email or fax concurrently with this verbal notification. DEMNET was installed and placed in service in 2015 replacing a degraded and outdated copper wire system. Since 2015 technology has evolved and has provided different solutions to provide notifications to offsite agencies. DEMNET is being replaced with a solution that will provide the OROs the same notification over multiple platforms instead of using a closed VOIP network.

The replacement for DEMNET is a vendor supplied mass notification system. In addition to automated verbal notification via phone calls to land lines, recipients are able to receive calls to designated cell phones, text messages, emails or push notifications through the vendors application, automatically notifying them of the event. This mass notification system is already in use at Duke Energy to notify and mobilize the Emergency Response Organization. The mass notification system has 2 geographically diverse, data centers located in the United States. These data centers have redundant power supplies, and communication paths able to backup and provide notification without interruption should one of the data centers become unavailable. The ORO warning points will continue to be notified, however, because this system does not require recipient devices to be on a specific network, SCOENS is able to notify additional contacts should OROs request them. Should SCOENS not be available to make notification, alternate methods to notify the offsite agencies continue to be described in EPIPs to contact the offsite agencies. Once initiated, mass notification of all contacts is completed almost simultaneously and within a very short time, meeting the required 15-minute notification from declaration. Additional contacts allow for more notification redundancy. Once the ORO receives the message, the ORO will "acknowledge" receipt of the message by following the prompts provided in the message. However, if acknowledgement is not received, site personnel designated to monitor acknowledgements will place a call to the individual ORO or OROs to transmit the notification prior to the 15-minute notification requirement. OROs have received training on this new method of notification and acknowledgment for continuity of notification.

The Emergency Notification Form (ENF) will continue to be transmitted to the OROs via email, and/or fax (if requested). SCOENS provides equivalent notification to the OROs as the DEMNET system did without compromising timeliness of notification. The replacement of DEMNET will eliminate the need for the governing procedure of DEMNET AD-EP-ALL-0406, Duke Emergency Management Network (DEMNET). SCOENS notification process is described within EPIPs and do not require generation of a specific governing procedure.

This proposed change in notification delivery method does not reduce the accuracy or reduce the capability to initiate and complete required emergency notifications within 15 minutes of the emergency declaration. The proposed change does not reduce the availability and reliability of primary and backup communications systems used to (1) notify and activate State and local emergency response centers or (2) enable communications between the licensees with ORO and Federal emergency operating centers in accordance with the emergency plan. The proposed change does not reduce the frequency of communication testing or maintenance. SCOENS communications testing will continue to be made monthly to the OROs. Procedures for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations continue to be established. Provisions continue to exist for prompt communications among principal response organizations

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to emergency personnel. Therefore, these proposed changes continue to comply with 10 CFR50.47 (b)(5) and (b)(6).

The communications methods updated for this EAL are consistent with the overall EAL scheme development guidance in NEI 99-01 revision 6 and lists communications methods as described in BNP Emergency Plan. The proposed changes maintain the licensee's capability to assess, classify, and declare an emergency condition within 15 minutes of the availability of indications. The classification of the event would NOT be different from that approved by the NRC in the site-specific application referenced in Section III. Implementation of the changes will maintain the accuracy and timeliness of a classification following a loss of all communications methods used to communicate on-site or with OROs or NRC. The meaning or intent of the basis of the approved EAL is unchanged. Therefore, these proposed changes continue to comply with 10 CFR50.47 (b)(4).

The DEMNET removal and SCOENS addition to the Duke Energy Common Emergency Plan was completed in revision 6 and evaluated under EREG 2527650.

Section XI: Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions
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Address each function identified in Section IX. Continue to Section XII.

Justification:

Proposed changes 3, 4, 5, 6, 7, and 8 remove Duke Emergency Management Network (DEMNET) and replace it with State and County Offsite Emergency Notification System (SCOENS). DEMNET is described as a closed network voice over internet protocol (VOIP) system. DEMNET uses a group call within this network, calling specific devices in the same network, to get all OROs in a conference call. This conference call provides the ability to verbally notify all OROs at the same time of a declared emergency or provide them with follow up notifications. This verbal notification is considered the official notification to the OROs. By process, the Emergency Notification Form (ENF) is transmitted to the OROs via email or fax concurrently with this verbal notification. DEMNET was installed and placed in service in 2015 replacing a degraded and outdated copper wire system. Since 2015 technology has evolved and has provided different solutions to provide notifications to offsite agencies. DEMNET is being replaced with a solution that will provide the OROs the same notification over multiple platforms instead of using a closed VOIP network.

The replacement for DEMNET is a vendor supplied mass notification system. In addition to automated verbal notification via phone calls to land lines, recipients are able to receive calls to designated cell phones, text messages, emails or push notifications through the vendors application, automatically notifying them of the event. This mass notification system is already in use at Duke Energy to notify and mobilize the Emergency Response Organization. The mass notification system has 2 geographically diverse, data centers located in the United States. These data centers have redundant power supplies, and communication paths able to backup and provide notification without interruption should one of the data centers become unavailable. The ORO warning points will continue to be notified, however, because this system does not require recipient devices to be on a specific network, SCOENS is able to notify additional contacts should OROs request them. Should SCOENS not be available to make notification, alternate methods to notify the offsite agencies continue to be described in EPIPS to contact the offsite agencies. Once initiated, mass notification of all contacts is completed almost simultaneously and within a very short time, meeting the required 15-minute notification from declaration. Additional contacts allow for more notification redundancy. Once the ORO receives the message, the ORO will "acknowledge" receipt of the message by following the prompts provided in the message. However, if acknowledgement is not received, site personnel designated to monitor acknowledgements will place a call to the individual ORO or OROs to transmit the notification prior to the 15-minute notification requirement. OROs have received training on this new method of notification and acknowledgment for continuity of notification.

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The Emergency Notification Form (ENF) will continue to be transmitted to the OROs via email, and/or fax (if requested). SCOENS provides equivalent notification to the OROs as the DEMNET system did without compromising timeliness of notification. The replacement of DEMNET will eliminate the need for the governing procedure of DEMNET AD-EP-ALL-0406, Duke Emergency Management Network (DEMNET). SCOENS notification process is described within EIPs and do not require generation of a specific governing procedure.

This proposed change in notification delivery method does not reduce the accuracy or reduce the capability to initiate and complete required emergency notifications within 15 minutes of the emergency declaration. The proposed change does not reduce the availability and reliability of primary and backup communications systems used to (1) notify and activate State and local emergency response centers or (2) enable communications between the licensees with ORO and Federal emergency operating centers in accordance with the emergency plan. The proposed change does not reduce the frequency of communication testing or maintenance. SCOENS communications testing will continue to be made monthly to the OROs. Procedures for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations continue to be established. Provisions continue to exist for prompt communications among principal response organizations to emergency personnel. Therefore, these proposed changes continue to comply with 10 CFR50.47 (b)(5) and (b)(6).

The communications methods updated for this EAL are consistent with the overall EAL scheme development guidance in NEI 99-01 revision 6 and lists communications methods as described in BNP Emergency Plan. The proposed changes maintain the licensee's capability to assess, classify, and declare an emergency condition within 15 minutes of the availability of indications. The classification of the event would NOT be different from that approved by the NRC in the site-specific application referenced in Section III. Implementation of the changes will maintain the accuracy and timeliness of a classification following a loss of all communications methods used to communicate on-site or with OROs or NRC. The meaning or intent of the basis of the approved EAL is unchanged. Therefore, these proposed changes continue to comply with 10 CFR50.47 (b)(4).

The DEMNET removal and SCOENS addition to the Duke Energy Common Emergency Plan was completed in revision 6 and evaluated under EREG 2527650.

The proposed change do not reduce the effectiveness of Brunswick Nuclear Plants Emergency Plans.

These changes continue to provide assurance that the Emergency Response Organization has the ability and capability to:

- respond to an emergency;
- perform functions in a timely manner;
- effectively identify and take measures to ensure protection of the public health and safety; and
- effectively use response equipment and emergency response procedures.

These changes continue to meet NRC requirements, as described in 10 CFR 50.47(b) and 10 CFR 50, Appendix E as well as the requirements of the Duke Energy Site's Emergency Plans as written and approved.

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Section XII: Evaluation Conclusion	
Answer the following questions about the proposed change:	
1. Does the proposed change comply with 10 CFR 50.47(b) and 10 CFR 50 Appendix E?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
3. Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Section XII: Conclusion	
Questions 1, 2 and 3 are answered YES, complete step below to create a General CAS assignment, and then continue on to Section XIV and implement change(s).	<input checked="" type="checkbox"/>
General CAS assignment created - Licensing submit changes in accordance with 10 CFR 50.4(b)(5)(ii) within 30 days of change implementation	<input checked="" type="checkbox"/>
Questions 1 or 2 or 3 are answered NO, complete Sections XIII and Section XIV .	<input type="checkbox"/>

Section XIII: Disposition of Proposed Change Requiring Prior NRC Approval	
Will the proposed change be submitted to the NRC for prior approval?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If No, reject the proposed change, or modify the proposed change and perform a new evaluation. Continue to Section XIV for this evaluation.	
If YES, then initiate a License Amendment Request in accordance 10 CFR 50.90, AD-LS-ALL-0002, Regulatory Correspondence, and AD-LS-ALL-0015, License Amendment Request and Changes to SLC, TRM, and TS Bases, and include the tracking number: _____ . Complete Section XIV .	

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Section XIV: Signatures: EP CFAM Final Approval is required for changes affecting Program Element 4a of Section VIII . If CFAM approval is NOT required, then mark the EP CFAM signature block as not applicable (N/A) to indicate that signature is not required. Section XIV as applicable.		
Preparer Name (Print): Mark Herms	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Candace Sexton	Reviewer Signature: See CAS	Date: See CAS
Approver Name (Print): Mark DeWire	Approver Signature: See CAS	Date: See CAS
Approver (EP CFAM, as required) Name (Print): David Thompson	Approver Signature: See CAS	Date: See CAS

QA RECORD

Attachment 2: 10 CFR 50.54(q) Review Form – BNP EPLAN Annex

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Section I: 10 CFR 50.54(q) Review Number: (EREG #):		02549869	
Applicable Sites and Applicability Determination # (5AD)			
<input checked="" type="checkbox"/> BNP	02549870	<input type="checkbox"/> CNS	<input type="checkbox"/> HNP
<input type="checkbox"/> MNS		<input type="checkbox"/> ONS	<input type="checkbox"/> RNP
Document #, EC #, or N/A	Revision # or N/A	Document or Activity Title	
EP-BNP-EPLAN-ANNEX	003	DUKE ENERGY BRUNSWICK EMERGENCY PLAN ANNEX	

Section II: Identify/Describe All Proposed Activities/Changes being Reviewed

Event or action, or series of actions that may result in a change to the emergency plan or affect the implementation of the emergency plan (Use attachments, or continue additional pages as necessary): Continue to **Section III**.

Activity/Changes:

This Duke Energy Brunswick Emergency Plan Annex supplements the Duke Energy Common Emergency Plan by providing site specific information unique to the site. It is subject to the same change and audit requirements as the Common Emergency Plan. The change being made is a result of DEMNET (Duke Energy Emergency Management Network) being decommissioned and replaced by SCOENS (State and County Offsite Emergency Notification System).

Change #	Section or Step #	Change From	Change to
1	Throughout	Old REV 002, old revision summary	Updated to REV 003 and updated the revision summary.
2	Section 6.0, Section F.1.b, bullet one	Duke Energy Emergency Management Network (DEMNET)	State and County Offsite Emergency Notification System

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10 CFR 50.54(q) Review Form**Section III: Description and Review of Licensing Basis Affected by the Proposed activity or Change:**

List all emergency plan sections that were reviewed for this activity by number and title.

IF THE ACTIVITY IN ITS ENTIRETY IS AN EMERGENCY PLAN CHANGE, EAL CHANGE OR EAL BASIS CHANGE, Enter Licensing Basis affected by the change and continue to **Section VI**.

Licensing Basis:

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan Revision 0, Section F
- EP-BNP-EPLAN-ANNEX, Duke Energy Brunswick Emergency Plan Annex Revision 0, Section F

Current Emergency Plans:

- EP-ALL-EPLAN, Duke Energy Common Emergency Plan, Rev 6, Section F
- EP-BNP-EPLAN-ANNEX, Duke Energy Brunswick Emergency Plan Annex, Rev 2, Section F

The differences in the approved and the current revision of the Emergency Plans have been reviewed, and they have been determined to meet the regulatory requirements required during the course of revisions.

Section IV: Ability to Maintain the Emergency Plan.

Answer the following questions related to impact on the ability to maintain the Emergency Plan. Continue to Section V.

1. Do any of the elements of the proposed activity change information or intent contained in the Emergency Plan?	Yes <input type="checkbox"/> No <input type="checkbox"/>
2. Do any elements of the proposed activity change the process or capability for alerting or notifying the public as described in the FEMA-approved Alert and Notification System Design Report?	Yes <input type="checkbox"/> No <input type="checkbox"/>
3. Do any elements of the proposed activity change the Evacuation Time Estimate results?	Yes <input type="checkbox"/> No <input type="checkbox"/>
4. Do any elements of the proposed activity change the On-Shift Staffing Analysis results?	Yes <input type="checkbox"/> No <input type="checkbox"/>
5. Does the Proposed activity require a change to the Emergency Plan Programmatic Description?	Yes <input type="checkbox"/> No <input type="checkbox"/>

If Question 5 was answered yes, and the document being reviewed is NOT the Emergency Plan, then exit this review until the Emergency Plan change is complete or the proposed change is modified to not change the Emergency Plan Programmatic Description.

Section IV conclusion:

- If questions 1-5 in **Section IV** marked NO, then complete **Section V**.
- If any question 1-5 of **Section IV** marked yes, then continue at **Section VI**.

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10 CFR 50.54(q) Review Form**Section V: Maintaining the Emergency Plan Conclusion.**

The questions in **Section IV** do not represent the total of all conditions that may cause a change to or impact the ability to maintain the emergency plan. Originator and reviewer signatures in **Section XIV** document that a review of all elements of the proposed change have been considered for their impact on the ability to maintain the emergency plan and their potential to change the emergency plan.

1. Provide a brief conclusion below that describes how the conditions, as described in the emergency plan, are maintained with this activity.
 2. Select the box below when the review completes all actions for all elements of the activity and no 10CFR50.54 screening or evaluation is required for any element. Continue to **Section XIV**.
- I have completed a review of this activity in accordance with 10CFR50.54(q)(2) and determined that the effectiveness of the emergency plan is maintained. This activity does not make any changes to the emergency plan. No further actions are required to screen or evaluate this activity in accordance with 10CFR50.54(q)(3).

Conclusion:

Section VI: Activity Previously Reviewed?

Is this activity fully bounded by an NRC approved 10CFR50.90 submittal or Alert and Notification System Design Report?

<input type="checkbox"/>	Yes	10 CFR 50.54(q) Evaluation is not required. Identify bounding source document below and continue to Section XIV .
<input checked="" type="checkbox"/>	No	Continue to Section VII .
<input type="checkbox"/>	Partially	If PARTIALLY , identify bounding source document and list changes bounded by the approved 10 CFR 50.90 or Alert and Notification System Design Report below. Changes not bound by the approved 10 CFR 50.90 or Alert and Notification System Design Report (i.e., part requiring further review). Continue the review in Section VII .

Bounding source document and list of bounded changes:

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Section VII: Editorial Changes		
<input type="checkbox"/>	Yes	All Activities/Changes identified in Section II are editorial/typographical changes such as formatting, paragraph numbering, spelling, or punctuation that does not change intent.
<input type="checkbox"/>	No	None of the Activities/Changes listed in Section II are editorial/typographical changes. Continue to Section VIII .
<input checked="" type="checkbox"/>	Partially	Some Activities/Changes are editorial/typographical.
<p>If Yes is checked, Identify the activities/changes listed in Section II that are editorial/typographical changes and provide justification below. Continue to Section XII.</p> <p>If Partially is checked, Identify the activities/changes listed in Section II that are editorial/typographical changes and provide justification below. Continue to Section VIII for changes not identified as editorial.</p>		

Justification:

The change(s) below are defined as editorial in accordance with AD-EP-ALL-0602, and do not change the intent of the steps as written.

Change 1 is an editorial change that updated the revision number throughout the document and updated the revision summary.

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Section VIII: Emergency Planning Element and Function Screen		
<i>(Utilize Reg Guide 1.219 and Attachment 1, Additional Regulatory Guidance References for additional assistance)</i>		
Does any of Proposed Activities/Changes Identified in Section I impact any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II? If yes check appropriate box.		
1	10 CFR 50.47(b)(1) Assignment of Responsibility (Organization Control)	
1a	Responsibility for emergency response is assigned.	<input type="checkbox"/>
1b	The response organization has the staff to respond and to augment staff on a continuing basis (24-7 staffing) in accordance with the emergency plan.	<input type="checkbox"/>
2	10 CFR 50.47(b)(2) Onsite Emergency Organization	
2a	Process ensures that on shift emergency response responsibilities are staffed and assigned	<input type="checkbox"/>
2b	The process for timely augmentation of onshift staff is established and maintained.	<input type="checkbox"/>
3	10 CFR 50.47(b)(3) Emergency Response Support and Resources	
3a	Arrangements for requesting and using off site assistance have been made.	<input type="checkbox"/>
3b	State and local staff can be accommodated at the EOF in accordance with the emergency plan.	<input type="checkbox"/>
4	10 CFR 50.47(b)(4) Emergency Classification System	RS
4a	A standard scheme of emergency classification and action levels is in use. (Requires V/V (Attachment 3) and final approval of Screen and Evaluation by EP CFAM)	<input type="checkbox"/>
5	10 CFR 50.47(b)(5) Notification Methods and Procedures	RS
5a	Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes (60 minutes for CR3) after declaration of an emergency and providing follow-up notification.	<input checked="" type="checkbox"/>
5b	Administrative and physical means have been established for alerting and providing prompt instructions to public within the plume exposure pathway.	<input type="checkbox"/>
5c	The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter	<input type="checkbox"/>
6	10 CFR 50.47(b)(6) Emergency Communications	
6a	Systems are established for prompt communication among principal emergency response organizations.	<input checked="" type="checkbox"/>
6b	Systems are established for prompt communication to emergency response personnel.	<input type="checkbox"/>
7	10 CFR 50.47(b)(7) Public Education and Information	
7a	Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ).	<input type="checkbox"/>
7b	Coordinated dissemination of public information during emergencies is established.	<input type="checkbox"/>
8	10 CFR 50.47(b)(8) Emergency Facilities and Equipment	
8a	Adequate facilities are maintained to support emergency response	<input type="checkbox"/>
8b	Adequate equipment is maintained to support emergency response.	<input type="checkbox"/>
9	10 CFR 50.47(b)(9) Accident Assessment	RS
9a	Methods, systems, and equipment for assessment of radioactive releases are in use.	<input type="checkbox"/>
10	10 CFR 50.47(b) (10) Protective Response	RS
10a	A range of public PARs is available for implementation during emergencies.	<input type="checkbox"/>

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10b	Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities.	<input type="checkbox"/>
10c	A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.	<input type="checkbox"/>
10d	KI is available for implementation as a protective action recommendation in those jurisdictions that chose to provide KI to the public.	<input type="checkbox"/>
11	10 CFR 50.47(b) (11) Radiological Exposure Control	
11a	The resources for controlling radiological exposures for emergency workers are established.	<input type="checkbox"/>
12	10 CFR 50.47(b) (12) Medical and Public Health Support	
12a	Arrangements are made for medical services for contaminated, injured individuals.	<input type="checkbox"/>
13	10 CFR 50.47(b) (13) Recovery Planning and Post-Accident Operations	
13a	Plans for recovery and reentry are developed.	<input type="checkbox"/>
14	10 CFR 50.47(b) (14) Drills and Exercises	
14a	A drill and exercise program (including radiological, medical, health physics and other program areas) is established.	<input type="checkbox"/>
14b	Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses.	<input type="checkbox"/>
14c	Identified weaknesses are corrected.	<input type="checkbox"/>
15	10 CFR 50.47(b) (15) Emergency Response Training	
15a	Training is provided to emergency responders.	<input type="checkbox"/>
16	10 CFR 50.47(b) (16) Emergency Plan Maintenance	
16a	Responsibility for emergency plan development and review is established.	<input type="checkbox"/>
16b	Planners responsible for emergency plan development and maintenance are properly trained.	<input type="checkbox"/>

Section VIII: Conclusion

- If any **Section VIII** criteria are checked, document the basis for conclusion below for any changes that are more than editorial, however not impacted by any of the identified criteria in Section VIII and continue the 50.54(q) Review in **Section IX**.
- If no **Section VIII** criteria are checked, 10CFR50.54(q)(3) Evaluation is NOT required. Document justification below for any changes that are more than editorial and continue to **Section XIV**.

Justification for changes that are more than editorial, however, not impacted by any of the identified criteria in Section VIII:

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10 CFR 50.54(q) Review Form**Section IX: Description of Emergency Plan Planning Standards, Functions and Program Elements Affected by the Proposed Change**

Copy each emergency planning standard, function and program element affected by the proposed change that was identified as applicable in **Section VIII**. Continue to **Section X**.

List affected Emergency Planning Standards, Functions, and Program Elements:

10CFR50.47(b)(5) - Notification Methods and Procedures:

Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and follow-up messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

10CFR50 Appendix E.IV.D. Notification Procedures (in part):

1. Administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, should they become necessary, shall be described. This description shall include identification of the appropriate officials, by title and agency, of the State and local government agencies within the EPZs.3. A licensee shall have the capability to notify responsible State and local governmental agencies within 15 minutes after declaring an emergency. The licensee shall demonstrate that the appropriate governmental authorities have the capability to make a public alerting and notification decision promptly on being informed by the licensee of an emergency condition. Prior to initial operation greater than 5 percent of rated thermal power of the first reactor at a site, each nuclear power reactor licensee shall demonstrate that administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ. The design objective of the prompt public alert and notification system shall be to have the capability to essentially complete the initial alerting and initiate notification of the public within the plume exposure pathway EPZ within about 15 minutes. The use of this alerting and notification capability will range from immediate alerting and notification of the public (within 15 minutes of the time that State and local officials are notified that a situation exists requiring urgent action) to the more likely events where there is substantial time available for the appropriate governmental authorities to make a judgment whether or not to activate the public alert and notification system. The alerting and notification capability shall additionally include administrative and physical means for a backup method of public alerting and notification capable of being used in the event the primary method of alerting and notification is unavailable during an emergency to alert or notify all or portions of the plume exposure pathway EPZ population. The backup method shall have the capability to alert and notify the public within the plume exposure pathway EPZ but does not need to meet the 15-minute design objective for the primary prompt public alert and notification system. When there is a decision to activate the alert and notification system, the appropriate governmental authorities will determine whether to activate the entire alert and notification system simultaneously or in a graduated or staged manner. The responsibility for activating such a public alert and notification system shall remain with the appropriate governmental authorities.

The associated EP Function is Function 5a:

"Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications."

The applicable program element is E1:

The mutually agreeable process for direct and prompt notification of response organizations, aligned with the emergency classification and action level scheme, is described.

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Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

10CFR50 Appendix E.IV.E:

9. (in part) - At least one onsite and one offsite communications system; each system shall have a backup power source. All communication plans shall have arrangements for emergencies, including titles and alternates for those in charge at both ends of the communication links and the primary and backup means of communication.

The associated EP Function is Function 6a:

"Systems are established for prompt communication among principal emergency response organizations."

The applicable program element is F.1.a, and F.1.b:**F.1.a:**

"Continuous capability for notification to, and activation of, the emergency response network, including a minimum of two independent communication links."

F.1.b:

"Communication with applicable organizations to include a description of the methods that may be used when contacting each organization."

Section X: Describe How the Proposed Change Complies with Relevant Emergency Preparedness Regulation(s) and Previous Commitment(s) Made to the NRC

If the emergency plan, modified as proposed, no longer complies with planning standards in 10 CFR 50.47(b) and the requirements in Appendix E to 10 CFR Part 50, then ensure the change is rejected, modified, or processed as an exemption request under 10 CFR 50.12, Specific Exemptions, rather than under 10 CFR 50.54(q). Address each Planning Standard identified in Section IX. Continue to Section XI.

Justification:

Change 2 removes Duke Emergency Management Network (DEMNET) and replaces it with State and County Offsite Emergency Notification System (SCOENS). DEMNET is described as a closed network voice over internet protocol (VOIP) system. DEMNET uses a group call within this network, calling specific devices in the same network, to get all OROs in a conference call. This conference call provides the ability to verbally notify all OROs at the same time of a declared emergency or provide them with follow up notifications. This verbal notification is considered the official notification to the OROs. By process, the Emergency Notification Form (ENF) is transmitted to the OROs via email or fax concurrently with this verbal notification. DEMNET was installed and placed in service in 2015 replacing a degraded and outdated copper wire system. Since 2015 technology has evolved and has provided different solutions to provide notifications to offsite agencies. DEMNET is being replaced with a solution that will provide the OROs the same notification over multiple platforms instead of using a closed VOIP network.

The replacement for DEMNET is a vendor supplied mass notification system. In addition to automated verbal notification via phone calls to land lines, recipients are able to receive calls to designated cell phones, text messages, emails or push notifications through the vendors application, automatically notifying them of the event. This mass notification system is already in use at Duke Energy to notify and mobilize the Emergency Response Organization. The mass notification system has two geographically diverse, data centers located in the United States. These data centers have redundant power supplies, and communication paths able to backup and provide notification without interruption should one of the data centers become unavailable. The ORO warning points will

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continue to be notified, however, because this system does not require recipient devices to be on a specific network, SCOENS is able to notify additional contacts should OROs request them. Should SCOENS not be available to make notification, alternate methods to notify the offsite agencies continue to be described in EPIPs to contact the offsite agencies. Once initiated, mass notification of all contacts is completed almost simultaneously and within a very short time, meeting the required 15-minute notification from declaration. Additional contacts allow for more notification redundancy. Once the ORO receives the message, the ORO will "acknowledge" receipt of the message by following the prompts provided in the message. However, if acknowledgement is not received, site personnel designated to monitor acknowledgements will place a call to the individual ORO or OROs to transmit the notification prior to the 15-minute notification requirement. OROs have received training on this new method of notification and acknowledgment for continuity of notification.

The Emergency Notification Form (ENF) will continue to be transmitted to the OROs via email. SCOENS provides equivalent notification to the OROs as the DEMNET system did without compromising timeliness of notification. SCOENS notification process is described within EPIPs and does not require generation of a specific governing procedure.

This proposed change in notification delivery method does not reduce the accuracy or reduce the capability to initiate and complete required emergency notifications within 15 minutes of the emergency declaration. The proposed change does not reduce the availability and reliability of primary and backup communications systems used to (1) notify and activate State and local emergency response centers or (2) enable communications between the licensees with ORO and Federal emergency operating centers in accordance with the emergency plan. The proposed change does not reduce the frequency of communication testing or maintenance. SCOENS communications testing will continue to be made monthly to the OROs. Procedures for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations continue to be established. Provisions continue to exist for prompt communications among principal response organizations to emergency personnel. Therefore, these proposed changes continue to comply with 10 CFR50.47 (b)(5) and (b)(6).

The DEMNET removal and SCOENS addition to the Duke Energy Common Emergency Plan was completed in revision 6 and evaluated under EREG 2527650.

Section XI: Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions

Address each function identified in **Section IX**. *Continue to Section XII.*

Justification:

Change 2 removes Duke Emergency Management Network (DEMNET) and replaces it with State and County Offsite Emergency Notification System (SCOENS). DEMNET is described as a closed network voice over internet protocol (VOIP) system. DEMNET uses a group call within this network, calling specific devices in the same network, to get all OROs in a conference call. This conference call provides the ability to verbally notify all OROs at the same time of a declared emergency or provide them with follow up notifications. This verbal notification is considered the official notification to the OROs. By process, the Emergency Notification Form (ENF) is transmitted to the OROs via email or fax concurrently with this verbal notification. DEMNET was installed and placed in service in 2015 replacing a degraded and outdated copper wire system. Since 2015 technology has evolved and has provided different solutions to provide notifications to offsite agencies. DEMNET is being replaced with a solution that will provide the OROs the same notification over multiple platforms instead of using a closed VOIP network.

The replacement for DEMNET is a vendor supplied mass notification system. In addition to automated verbal notification via phone calls to land lines, recipients are able to receive calls to designated cell phones, text messages, emails or push notifications through the vendors application, automatically notifying them of the event. This mass notification system is already in use at Duke Energy to notify and mobilize the Emergency Response Organization. The mass notification system has two geographically diverse, data centers located in the United States. These data centers have redundant power supplies, and communication paths able to backup and provide

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notification without interruption should one of the data centers become unavailable. The ORO warning points will continue to be notified, however, because this system does not require recipient devices to be on a specific network, SCOENS is able to notify additional contacts should OROs request them. Should SCOENS not be available to make notification, alternate methods to notify the offsite agencies continue to be described in EPIPs to contact the offsite agencies. Once initiated, mass notification of all contacts is completed almost simultaneously and within a very short time, meeting the required 15-minute notification from declaration. Additional contacts allow for more notification redundancy. Once the ORO receives the message, the ORO will "acknowledge" receipt of the message by following the prompts provided in the message. However, if acknowledgement is not received, site personnel designated to monitor acknowledgements will place a call to the individual ORO or OROs to transmit the notification prior to the 15-minute notification requirement. OROs have received training on this new method of notification and acknowledgment for continuity of notification.

The Emergency Notification Form (ENF) will continue to be transmitted to the OROs via email. SCOENS provides equivalent notification to the OROs as the DEMNET system did without compromising timeliness of notification. SCOENS notification process is described within EPIPs and does not require generation of a specific governing procedure.

This proposed change in notification delivery method does not reduce the accuracy or reduce the capability to initiate and complete required emergency notifications within 15 minutes of the emergency declaration. The proposed change does not reduce the availability and reliability of primary and backup communications systems used to (1) notify and activate State and local emergency response centers or (2) enable communications between the licensees with ORO and Federal emergency operating centers in accordance with the emergency plan. The proposed change does not reduce the frequency of communication testing or maintenance. SCOENS communications testing will continue to be made monthly to the OROs. Procedures for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations continue to be established. Provisions continue to exist for prompt communications among principal response organizations to emergency personnel. Therefore, these proposed changes continue to comply with 10 CFR 50.47 (b)(5) and (b)(6).

The proposed changes described provide assurance that the normal plant operating organization and ERO has the ability and capability to:

- respond to an emergency.
- perform functions in a timely manner.
- effectively identify and take measures to ensure protection of the public health and safety; and
- effectively use response equipment and emergency response procedures.

These proposed changes continue to meet NRC requirements, as described in 10 CFR 50.47(b) and 10 CFR 50, Appendix E as well as the requirements of the Duke Energy Common Emergency Plan as written and approved. Therefore, the proposed changes do not reduce the effectiveness of the Duke Energy Common Emergency plan or the site-specific emergency plan annexes.

The DEMNET removal and SCOENS addition to the Duke Energy Common Emergency Plan was completed in revision 6 and evaluated under EREG 2527650.

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Answer the following questions about the proposed change:

1. Does the proposed change comply with 10 CFR 50.47(b) and 10 CFR 50 Appendix E?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
3. Does the proposed change maintain the current Emergency Action Level (EAL) scheme?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Section XII: Conclusion

Questions 1, 2 and 3 are answered YES, complete step below to create a General CAS assignment, and then continue on to Section XIV and implement change(s).	<input checked="" type="checkbox"/>
General CAS assignment created - Licensing submit changes in accordance with 10 CFR 50.4(b)(5)(ii) within 30 days of change implementation	<input checked="" type="checkbox"/>
Questions 1 or 2 or 3 are answered NO, complete Sections XIII and Section XIV .	<input type="checkbox"/>

Section XIII: Disposition of Proposed Change Requiring Prior NRC Approval

Will the proposed change be submitted to the NRC for prior approval?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If No, reject the proposed change, or modify the proposed change and perform a new evaluation. Continue to Section XIV for this evaluation.	
If YES, then initiate a License Amendment Request in accordance 10 CFR 50.90, AD-LS-ALL-0002, Regulatory Correspondence, and AD-LS-ALL-0015, License Amendment Request and Changes to SLC, TRM, and TS Bases, and include the tracking number: _____ . Complete Section XIV .	

Section XIV: Signatures:EP CFAM Final Approval is required for changes affecting Program Element 4a of **Section VIII**. If CFAM approval is **NOT** required, then mark the EP CFAM signature block as not applicable (N/A) to indicate that signature is not required. **Section XIV** as applicable.

Preparer Name (Print): Mark Herms	Preparer Signature: See CAS	Date: See CAS
Reviewer Name (Print): Candace Sexton	Reviewer Signature: See CAS	Date: See CAS
Approver Name (Print): Mark DeWire	Approver Signature: See CAS	Date: See CAS
Approver (EP CFAM, as required) Name (Print): N/A	Approver Signature: N/A	Date: N/A

QA RECORD